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HABITAT DISTRIBUTION OF CADDIS LARVAE IN THE NORTHEASTERN POLISH LAKES

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Caddis larvae were collected intensively at monthly intervals in four lakes in the vicinity of Olsztyn during the years 1987-1990 and occasionally from ten northeastern Polish lakes in the years 1954-1966 (unpublished data of Szczepańska) and in the years 1987-1992 (Fig.1).

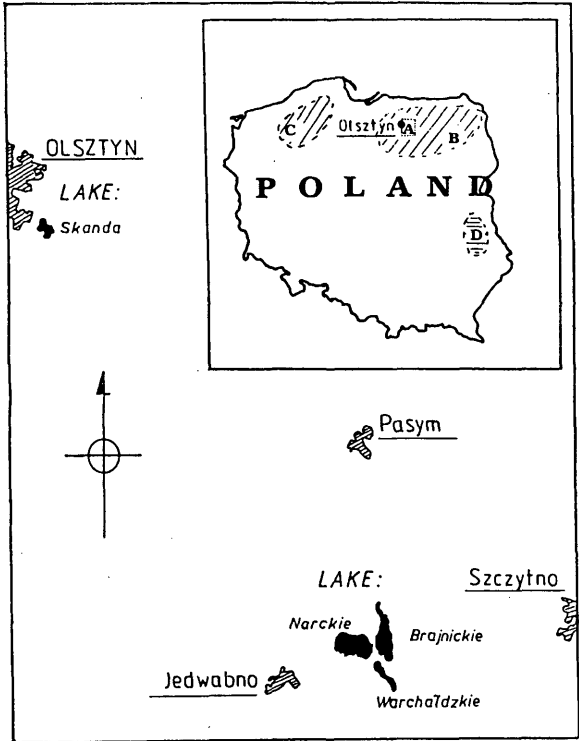


Figure 1. The study area, A..lakes intensively investigated in the vicinity of Olsztyn, B..occasionally investigated, C..lakes from the Pomeranian Lakeland and D..Eastern Poland.

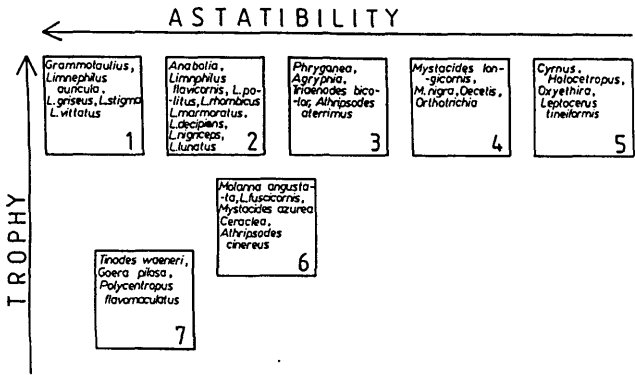
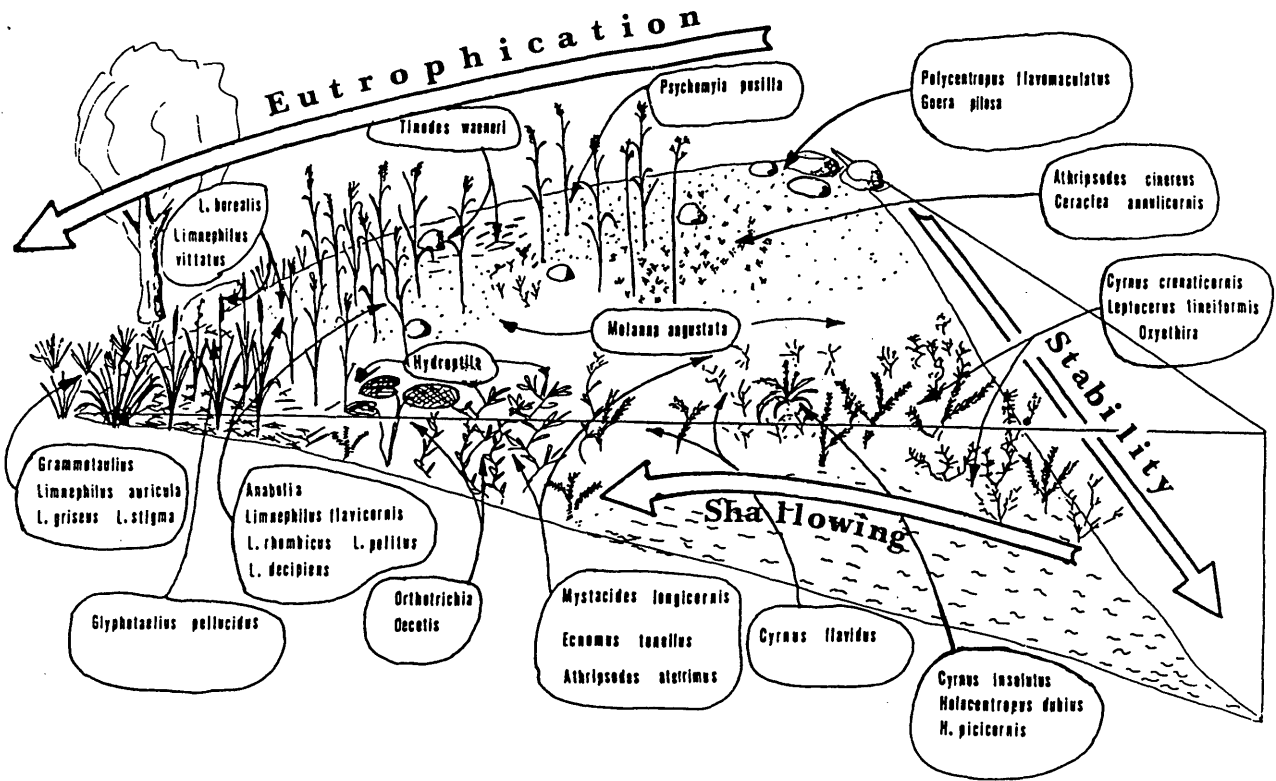


Figure 3. A model of distribution of caddis larvae assemblages along the stability (astability) and trophic gradients (from Czachorowski in prep.C)

Based on the vertical distribution (Czachorowski 1989, 1993, 1993a), co-occurrence (Czachorowski 1992; in prep.B), and habitat distribution of larvae (Czachorowski 1992, in prep.C), I propose a model of distribution of caddis larvae in the Masurian lakes (Fig. 2). The model takes the trophic and stability patterns (Fig. 3) of the lake habitats (and their changes in time or in space) into account. This model is applicable only to Northern Polish lakes (Czachorowski in prep.A). Woodland lakes in this area have similar but not identical patterns of the caddis habitat distribution. In the helophyte zone of the woodland lakes (e.g. the lobelian lakes) we have typically Limnephilus borealis, L.stigma, L.fuscicornis, L.binotatus, L.nigriceps, L.politus, Trichostegia minor, Glyptotaelius pellucidus, Mystacides azurea, Oecetis testacea, Trienodes conspersus and Ecnomus tenellus. Also many Phryganeidae occur in the elodeid and the isoetid zone (Czachorowski in press) of these lakes.

Figure 2. A model of habitat distribution in the Masurian lakes.



In the helophyte zone of the Eastern Polish lakes Limnephilidae do not normally occur or are very scarce (only two species: Czachorowski & Kornijów 1993, in prep.). Thus there are geographical (regional) patterns of the habitat distribution of caddis larvae in these lakes, and the lake's surroundings have an influence on the caddis habitat distribution.

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- EUROPEAN FAUNISTIC SUMMARIES ON CADDISFLIES
- On the occasion of the presentation of Ciubuc's paper, I add a list of survey papers on the regional distribution of Trichoptera in European countries which may be used for the drawing of distribution maps and similar purposes. It would be desirable to produce similar survey papers for the other countries, or for those countries for which the surveys are not up to date, if necessary by international cooperation, e.g. for France or Russia.
- Albania: No summary.
- Austria: Malicky 1989 (*Z. Arb. Öst. Ent.* 41:32-40).
- Belgium and Luxembourg: Stroot 1984 (*Atlas provisoire des insectes de Belgique: Les Trichoptères de Belgique et des régions limitrophes*, 75 pp.).
- Britain: Wallace 1991 (*A review of the Trichoptera of Great Britain; Res. & Surv. nat. conserv.* no. 32:1-59).
- Bulgaria: Kumanski 1985, 1988 (*Fauna na Bulgarija* 15:1-243, 19:1-354).
- Canary Islands: Nybom 1948 (*Comm. Biol. (Soc. Sci. Fenn.)* 8(14):1-19; outdated, to be revised).
- Former Czechoslovakia: Novák & Obr 1977 (*Acta Faun. Ent. Mus. Nat. Pragae, Suppl.* 4:135-141).
- Finland: Nybom 1960 (*Fauna Fennica* 6:1-56).
- France: Berland & Mosely 1937 (*Ann. Soc. Ent. Fr.* 105:111-168; outdated).
- Germany: List in press by Klima & al. For the former GDR: Mey 1979 (*Ent. Nachr.* 23:81-88).
- Greece: Malicky 1975 (*Ann. Mus. Goulondris* 2:105-135; outdated: new fauna in preparation).
- Hungary: Uherkovich & Nógrádi 1991 (*Proc. 6th Int. Symp. Trich.*:247-253).
- Iberian Peninsula: Gonzalez & al. 1992 (*Listas de la flora y fauna de las aguas con. de la Peninsula Iberica, Publ.* 11:1-200).
- Ireland: O'Connor 1987 (*Proc. 5th Int. Symp. Trich.*:73-77).
- Iceland: Gislason 1981 (*Proc. 3rd Int. Symp. Trich.*:99-109).
- Italy: Cianficconi & Moretti 1991 (*Proc. 6th Int. Symp. Trich.*:265-274).
- Latvia: Katchalova 1972 (*Rutchejniki rek Latvii, Riga*, 215 pp.), Spuris 1967 (*Fauna rutchejnikov oser Latvii, Riga*, 114 pp.).
- Madeira: Stauder 1991 (*Bol. Mus. Mun. Funchal* 43:243-299).
- Isle of Man: O'Connor & al. 1993 (*Proc. 7th Int. Symp. Trich.*:85-86).
- The Netherlands: Fischer 1934 (*Tijd. Ent.* 77:177-201; outdated).
- Poland: Tomaszewski 1965 (*Katalog Fauny Polski* 28:1-104; outdated).
- Portugal: Terra 1981 (*Bol. Soc. Port. Ent.* 12:1-42).
- Romania: Ciubuc 1993 (*Trav. Mus. Hist. nat. Gr. Antipa* 33:11-147; see p.).
- Russia: no summary.
- Scandinavia: Additions for Scandinavia including Denmark, the Faroes and Iceland, but no detailed survey: Svensson & Tjeder 1975 (*Ent. scand.* 6:261-274), Andersen & Wiberg-Larsen 1987 (*Ent. scand.* 18:165-184).
- Sweden: Forsslund & Tjeder 1942 (*Opusc. Ent.* 7:93-107).
- Switzerland: No summary.
- Turkey: Sipahiler & Malicky 1987 (*Entomofauna (Linz)* 8:77-165), additions: Malicky & Sipahiler 1993 (*Mitt. Schweiz. Ent. Ges.* 66:457-478).
- Former Yugoslavia: no summary. Serbia: Marinković 1975 (*Rec. trav. faune ins. Serb.* 1:221-236); Hercegovina: Marinković 1978 (*God. Biol. inst. Univ. Sarajevu* 31:115-131); both very incomplete.

.....other countries and regions....?